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Head nodding in arteriopathic dementia—a new kind of tic?

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Summary

An elderly woman with arteriopathic dementia developed a bizarre and repetitive nodding movement of the head. This is believed to be an unusual form of tic.

Introduction

Shapiro *et al.* (1976) described the essential features of tic as involuntary movements of functionally related groups of skeletal muscles in one or more parts of the body, with or without involuntary noises or words. These symptoms are rapid, repetitive, purposeless, stereotyped, of variable intensity and occur at irregular intervals.

The movements are usually simple in nature, involving few muscle groups, and are not co-ordinated. A case is now reported of a woman with features of tic in which the movement was slow, complex and co-ordinated.

Case report

A 72-year-old woman was admitted to St Bartholomew's Hospital, London, after she had been found wandering far from home. She had suffered strokes affecting the right side of the body at 2 years and again at 6 months before admission. Recovery of power in the limbs was good after both strokes, but after the second stroke she had severe expressive dysphasia, dementia, emotional lability and incontinence of urine. She also developed a repetitive nodding movement of the head.

At the time of admission she was fully mobile, although she walked with very little arm swinging. She could feed herself with some assistance from a nurse and could drink from a beaker unaided. Urinary continence returned after 10 days of hospital supervision. The head nodding was a most striking phenomenon, quite unlike any involuntary movement seen before. It consisted of neck flexion together with the closing of both eyes; the neck was flexed until the chin reached the chest wall, and was then extended. During extension the eyes were opened again and the patient then smiled for a few seconds. The duration of the action was approximately 2 s and the frequency was between 3 and 15 times per min. Distracting the patient's attention reduced the frequency of the movement but did not abolish it. Nodding occurred while the patient was standing or sitting upright and never while she was supine. Nodding did not occur when the patient was asleep or upset.

As far as is known the patient had not received any drug treatment before admission and her nodding was unaffected by sedation with chlormethiazole, promazine or chlorpromazine.

Discussion

The overall impression created by the patient's repeated head nodding and smiling was most bizarre, and quite unlike any abnormal movement mentioned in published descriptions of tic. Head nodding has been reported (Beneš *et al.*, 1977) in a total of 19 children with hydrocephalus of slow onset. The head movement may be backwards and forwards, or from side to side, and may occur as frequently as 3 times per second. This condition has been given the imaginative title 'The bobble head doll syndrome' (Benton *et al.*, 1966) and is probably a tremor of the head rather than a tic. The authors believe that their patient's nodding movement was a tic; although the movement was slow, steady and complex, all the other classical features of tic were present.

The abnormal head movement first appeared immediately after the patient's second stroke, but cerebrovascular disease is not in itself an accepted cause of tic. It is possible that the tic resulted from the change in personality and loss of intellectual function rather than any specific neurological lesion. Siomopoulous (1976) has suggested that tic is due to persistence of a defective conditioned response, and that brain damage might facilitate such defective conditioning. It is possible that the association of tic with arteriopathic or senile dementia is more common than the paucity of previous reports would suggest.

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